**Objective 1:** To measure the effect of intrinsic versus monetary value framings in motivating individuals to donate to an environmental charity

**Variables included:**

* Q34: How much, if any, of your £3 payment would you like us to donate to this environmental charity on your behalf?
* V2: binary donation
* Block message frame

**Analysis undertaken:**

1. Descriptive statistics
2. Specified 2 DVs – A new binary variable (whether they donated anything at all or not Yes/No) and a continuous variable (the amount they donated).
3. ANOVA – where V2 and Q34 are the DV and the IV’s are message group

**Outputs:** See excel spreadsheet.

* Q34 sig: 0.797
* V2 binary donation: 0.875

**Interpretation:** No significant difference between message frame and the value participants donated to an environmental charity

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**Objective 1**

This section presents the findings from research objective 1 on how effective each message frame was at influencing participants donation behaviour.

**Figure 1** below shows the mean donation amount across the different message frames. The mean donation for all participants was £1.24. Controlling for no other factors, the mean donation amount was greatest for those who received the monetary frame at £1.32 and lowest for the participants that received the biospheric frame at £1.19.

Further exploratory analysis was completed to understand if there were differences in whether participants donated anything at all, depending on the message frame they received. Across all participants, 61% chose to make a donation to the environmental charity. The proportion of those who did donate was highest for those who received the monetary value frame (64%) and lowest for those who received the biospheric frame (59%).

**Table 1: Mean donation amount across different message frames**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Mean donation |  |  |
| Message | Sample size | £ | % | % |
| Control | 257 | 1.26 | 39% | 61% |
| Biospheric frame | 240 | 1.19 | 41% | 59% |
| Altrusistic frame | 256 | 1.25 | 39% | 61% |
| Health frame | 251 | 1.20 | 39% | 61% |
| Monetary frame | 257 | 1.32 | 36% | 64% |
| Total base | 1261 | 1.24 | 39% | 61% |

Statistical analysis of the effect of the message frame shown on the amount participants donated showed no statistically significant difference between the message frame participants had, compared to the donation amount (see Appendix 1, Table 1).

In addition, no statistically significant difference was found between the binary donation and the message frame participants received (see Appendix 1, Table 2).

**Objective 2:** To understand what factors predict whether an individual will donate to an environmental charity including message framings, environmental attitudes, knowledge and demographic variables.

**Variables included:**

* Q34: How much, if any, of your £3 payment would you like us to donate to this environmental charity on your behalf?
* **Environmental knowledge questions (Q26-Q28) and new variable created to give a high/med/low score.**
* **Attitudinal questions (Q16),**
* **Demographic variables (Q76, Q2-Q5, Q7-Q8, Q37).**

**Analysis undertaken:**

1. **Descriptive stats**
2. **Shapiro-Wilk Test of normality:** To see if the data is normally distributed. If the Sig. value of the Shapiro-Wilk Test is greater than 0.05, the data is normal. If it is below 0.05, the data significantly deviate from a normal distribution.
   1. The data is not normally distributed
3. **~~ANOVA (if normally distributed) or~~ Kruskal-Wallis test[[1]](#footnote-1) (if not):** To understand if there are differences between Q34 and IV’s
   1. I have run ANOVAS?
4. **Correlation:** The aim of the correlation test is to check whether there are any independent variables that are highly correlated with each other before including them in the regression.
   1. I think I have done the correlation but not 100% sure how to interpret
5. **Multiple linear regression:** The aim of the multiple regression is to identify the set of independent variables that best explain the changes in the dependent variable. Ultimately, the model will provide the evidence to say that whether a person gives money or not (I think this was the DV?) is linked to specific characteristics, and that they are more likely to if they have more or less of a specific characteristic.

I have run the regression using the variables that were significant from the ANOVAS but my R (.297) and R squared (.081) numbers are really small and not sure if something hasn’t worked 100% because the variables I have used don’t satisfy the regression assumptions of:

* Linear relationship
* Multivariate normality
* No multicollinearity
* Homoscedasticity

**Outputs:**

See excel spreadsheet here

**Objective 2:**

This section presents the findings from research objective 2 to understand what factors predict whether an individual will donate to an environmental charity including message framings, environmental attitudes, knowledge and demographic variables.

**Figure 2** shows the descriptive statistics donation amount across the different variables and grouped by demographics and environmental attitudes/knowledge. For each variable, the mean, standard deviation and range of scores was recorded (see (Appendix 1, Table X).

Statistical analysis revealed:

* **Older participants** had a higher mean donation than younger participants
* Participants with a **household income of more than £75,000** had a higher mean donation
* Participants who reported that their **income has increased** since Covid-19 had a higher mean donation
* Participants that have an **interest in the environment** and think it is **important** had a higher mean donation
* Participants that are likely to **engage in environmental behaviours** have a higher mean donation
* Participants that feel **responsible for the environment** and believe they can **make a difference**, had a higher mean donation
* Those who are members of **environmental organisations** or have donated to **environmental charities** previously, have a higher mean donation
* Participants who scored highly for the **environmental knowledge** questions had a high mean donation

|  |  |  |  |
| --- | --- | --- | --- |
| Q2 | ***Please select the region where you live.*** | N | Mean |
|  | North East | 65 | 1.34 |
|  | North West | 166 | 1.13 |
|  | Yorkshire and The Humber | 125 | 1.13 |
|  | East Midlands | 103 | 1.28 |
|  | West Midlands | 130 | 1.08 |
|  | East of England | 134 | 1.16 |
|  | London | 200 | 1.35 |
|  | South West | 128 | 1.39 |
|  | South East | 205 | 1.35 |
| Q3 | ***What is your age?*** |  |  |
|  | 18-24 | 150 | 0.92 |
|  | 25-34 | 231 | 1.19 |
|  | 35-44 | 229 | 1.10 |
|  | 45-54 | 256 | 1.18 |
|  | 55-64 | 210 | 1.45 |
|  | 65-74 | 145 | 1.56 |
|  | 75+ | 35 | 1.91 |
| Q4 | ***Which gender do you identify with?*** |  |  |
|  | Female | 641 | 1.24 |
|  | Male | 615 | 1.26 |
| Q5 | ***Which of the following bands best represented your annual household income in the year 2019?*** | | |
|  | £0 - £19,999 | 273 | 1.07 |
|  | £20,000 - £34,999 | 292 | 1.23 |
|  | £35,000 - £49,999 | 263 | 1.32 |
|  | £50,000 - £74,000 | 190 | 1.27 |
|  | More than £75,000 | 144 | 1.52 |
|  | Don't know | 25 | 0.73 |
| Q37 | ***Has your income changed due to COVID-19?*** |  |  |
|  | Increased a lot | 22 | 1.43 |
|  | Increased slightly | 98 | 1.39 |
|  | Stayed the same | 681 | 1.33 |
|  | Decreased slightly | 255 | 1.24 |
|  | Decreased a lot | 171 | 0.95 |
|  | Don't know | 19 | 0.76 |
| Q7 | ***What is your highest level of educational qualification*** | |  |
|  | PhD/Doctorate | 40 | 1.11 |
|  | Masters | 133 | 1.45 |
|  | Bachelor's Degree or equivalent (Such as NVQ level 5) | 341 | 1.29 |
|  | Higher education (Such as HND or NVQ level 4) | 118 | 1.33 |
|  | A level or equivalent (such as O level or NVQ level 3) | 191 | 1.29 |
|  | GCSE and below (Such as O level or RSA Diploma) | 276 | 1.19 |
|  | Other qualifications (Such as NVQ level 1) | 82 | 0.97 |
|  | No qualifications | 50 | 1.12 |
| Q8 | ***Which of the following would best describe your ethnicity?*** | | |
|  | White/White British | 1059 | 1.27 |
|  | Asian/Asian British | 110 | 1.07 |
|  | Black/African/Caribbean British | 40 | 1.24 |
|  | Mixed/Multiple Ethic Groups | 28 | 1.20 |
|  | Other Ethnic groups | 7 | 1.71 |
| Q16 | ***How important is protecting the environment to you personally?*** | 1244 | 1.26 |
|  | 1 | 38 | 0.68 |
|  | 2 | 163 | 0.90 |
|  | 3 | 431 | 1.20 |
|  | 4 | 622 | 1.41 |
|  | 5 - extremely | 6 | 0.50 |
| Q57 | ***How likely are you to engage in environmentally friendly behaviours?*** | | |
|  | 1 - not at all | 13 | 0.62 |
|  | 2 | 40 | 0.63 |
|  | 3 | 204 | 1.10 |
|  | 4 | 487 | 1.21 |
|  | 5 - extremely | 508 | 1.41 |
| Q58 | ***How responsible do you think you are for helping sustain the natural world?*** | | |
|  | 1 - not at all | 16 | 0.44 |
|  | 2 | 56 | 0.90 |
|  | 3 | 287 | 1.10 |
|  | 4 | 496 | 1.36 |
|  | 5 - extremely | 395 | 1.32 |
| Q21 | ***How interested are you in the environment?*** |  |  |
|  | 1 - not at all interested | 18 | 0.33 |
|  | 2 | 41 | 0.83 |
|  | 3 | 244 | 1.09 |
|  | 4 | 485 | 1.22 |
|  | 5 - extremely interested | 465 | 1.44 |
| Q67 | ***How much difference do you think you can personally make in improving the UK's environment?*** | | |
|  | 1 - no difference at all | 45 | 0.70 |
|  | 2 | 131 | 1.14 |
|  | 3 | 435 | 1.39 |
|  | 4 | 393 | 1.27 |
|  | 5 - a huge difference | 247 | 1.13 |
| Q68 | ***Do you think you have enough knowledge about how to protect the environment?*** | | |
|  | 1 - No not at all | 41 | 0.93 |
|  | 2 | 124 | 1.35 |
|  | 3 | 445 | 1.22 |
|  | 4 | 421 | 1.32 |
|  | 5 - Yes, definitely | 222 | 1.18 |
| V2 | ***Overall environmental knowledge*** |  |  |
|  | Low | 458 | 0.98 |
|  | Medium | 520 | 1.36 |
|  | High | 283 | 1.47 |

The correlations between the donation amount and the predictors (see table 2) showed that age is positively correlated with the donation amount,

**Table 2: Intercorrelations between Donation and demographic predictor variables in the regression analysis**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | Q34 | Q2 | Q3 | Q4 | Q5 | Q7 | Q8 | Q37 |
|  | Q34. Donation |  |  |  |  |  |  |  |  |
| Q2. Region | .075 |  |  |  |  |  |  |  |
| Q3. Age | .162 | .030 |  |  |  |  |  |  |
| Q4. Gender | .009 | .007 | .187 |  |  |  |  |  |
| Q5. Household income | .066 | .150 | -.082 | .084 |  |  |  |  |
| Q7. Education | -.066 | -.074 | .041 | -.067 | -.303 |  |  |  |
| Q8. Ethnicity | -.014 | .024 | -.236 | .005 | .066 | -.073 |  |  |
| Q37. Income change since Covid-19 | -.111 | -.015 | -.118 | -.156 | -.105 | .026 | .008 |  |

The higher the age, the more people donate

Statistical analysis was completed to compare the mean donation amount between groups in order to determine whether there is statistical evidence that the associated population means are significantly different.

measure the effect of the variables in motivating individuals to donate to an environmental charity

of the effect of the variables on the amount participants donated showed no statistically significant difference between the message frame participants had, compared to the donation amount (see Appendix X, table X).

1. <https://statistics.laerd.com/spss-tutorials/kruskal-wallis-h-test-using-spss-statistics.php> and <https://statistics.laerd.com/spss-tutorials/kruskal-wallis-h-test-using-spss-statistics.php#procedure> [↑](#footnote-ref-1)